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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,167	09/26/2001	Yifeng Wu	10019603 -1	9602

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EXAMINER	
MENBERU, BENIYAM	
ART UNIT	**PAPER NUMBER**
2625	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/964,167	WU ET AL.	
	Examiner	Art Unit	
	Beniyam Menberu	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 5-20* is/are rejected.

7)☒ Claim(s) *4* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Arguments

1. Applicant's arguments, see Remarks, filed November 18, 2005, with respect to the rejection(s) of claim(s) 1, 2, 5, 8, 9, 10, 13, 16, 17, and 18 under U.S. Patent No. 5537516 to Sherman et al in view of U.S. Patent No. 6331042 to Yamada have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of U.S. Patent No. 6606167 to Rees et al.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claim 1, 2, 5, 8, 9, 10, 13, 16, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5537516 to Sherman et al in view of U.S. Patent No. 6606167 to Rees et al.

Regarding claims 1 and 17, Sherman et al disclose a generalized color calibration architecture and program (column 7, lines 22-30) comprising:

a first interface to receive raw measuring data of a sample from a measuring tool, the data having a color data type, the sample having one or more color targets on

which basis color calibration of a device is to be performed, each color target having an arrangement of one or more color patches (column 17, lines 1-14; column 5, lines 33-35; column 12, lines 10-15);

a second interface to receive a color calibration approach (column 15, lines 1-24), the color data type (column 2, lines 54-57; column 5, lines 33-40), one or more target identifiers specifying the one or more color targets (column 8, lines 60-62; column 14, lines 23-26), and a color patch order for each target identifier specifying the arrangement of the one or more color patches of a corresponding one of the one or more color targets (column 10, lines 56-60, lines 64-67); and,

a color calibration manager to perform the calibration based on the raw measuring data, the color data type, the one or more target identifiers, and the color patch order for each target identifier, according to the color calibration approach, the calibration one of yielding and updating one or more color conversion tables for subsequent use with the device (column 16, lines 47-60).

However Sherman et al does not disclose a color calibration approach input by a user as a desired one of a number of different color calibration approaches.

Rees et al disclose a color calibration approach input by a user as a desired one of a number of different color calibration approaches (column 4, lines 6-24; column 5, lines 28-67).

Sherman et al and Rees et al are combinable because they are in the similar problem area of color calibration.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the user input calibration of Rees et al with the system of Sherman et al to implement user based color calibration.

The motivation to combine the reference is clear because the system of Rees et al provides for visual selection for the user for calibration of printer and provides for accurate printing (column 2, lines 59-67; column 3, lines 44-58).

Regarding claims 2 and 18, Sherman et al in view of Rees et al teach all the limitations of claims 1 and 17. Further Sherman et al disclose the architecture and program, further comprising a data converter to convert the raw measuring data, the color data type, the one or more target identifiers, and the color patch order for each target identifier to formatted data for input to the color calibration manager (column 13, lines 66-67; column 14, lines 1-3, lines 47-60).

Regarding claim 5, Sherman et al in view of Rees et al teach all the limitations of claim 1. Further Sherman et al in view of Rees et al disclose the architecture of claim 1, wherein the measuring tool comprises one of: an embedded device sensor, a densitometer, a colorimeter, and a spectrophotometer (column 13, lines 31-35).

Regarding claim 8, Sherman et al in view of Rees et al teach all the limitations of claim 1. Further Sherman et al disclose the architecture of claim 1, wherein the color data type comprises one of: a luminance data type, a CIEXYZ data type, a CIELAB data type, and a spectrum data type (column 2, lines 55-58).

Regarding claim 9, Sherman et al disclose a generalized color calibration method comprising:

printing by a device a sample having one or more color targets on which basis color calibration of the printer is to be performed (column 9, lines 53-57), each color target having an arrangement of one or more color patches (column 17, lines 1-14; column 5, lines 33-35; column 12, lines 10-15);

measuring by a measuring tool raw measuring data of the sample having a color data type (column 13, lines 32-38);

inputting a color calibration approach(column 15, lines 1-24), the raw measuring data (column 12, lines 58-62; column 13, lines 4-10), the color data type (column 2, lines 54-57; column 5, lines 33-40), one or more target identifiers specifying the one or more color targets (column 8, lines 60-62; column 14, lines 23-26), and a color patch order for each target identifier specifying the arrangement of the one or more color patches of a corresponding one of the one or more color targets (column 10, lines 56-60, lines 64-67);

performing the color calibration of the printer based on the raw measuring data, the color data type, the one or more target identifiers, and the color patch order for each target identifier, according to the color calibration approach, the color calibration one of yielding and updating one or more color conversion tables for use with the printer during subsequent printing (column 16, lines 47-60); and,

outputting the one or more color conversion tables (column 12, lines 9-13).

However Sherman et al does not disclose a color calibration approach input by a user as a desired one of a number of different color calibration approaches.

Sherman et al and Rees et al are combinable because they are in the similar problem area of color calibration.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the user input calibration of Rees et al with the system of Sherman et al to implement user based color calibration.

The motivation to combine the reference is clear because the system of Rees et al provides for visual selection for the user for calibration of printer and provides for accurate printing (column 2, lines 59-67; column 3, lines 44-58).

Regarding claim 10, Sherman et al in view of Rees et al teach all the limitations of claim 9. Further Sherman et al disclose the method of claim 9, further comprising, prior to performing the color calibration, converting the raw measuring data, the color data type, the one or more target identifiers, and the color patch order for each target identifier to formatted data (column 13, lines 66-67; column 14, lines 1-3, lines 47-60; column 15, lines 1-8).

Regarding claim 13, Sherman et al in view of Rees et al teach all the limitations of claim 9. Further Sherman et al disclose the method of claim 9, wherein measuring by the measuring tool comprises measuring by a tool external to the printer, after printing the sample by the printer has been completed (column 13, lines 20-25; Figure 12, reference 1202, 406; column 16, lines 36-41).

Regarding claim 16, Sherman et al in view of Rees et al teach all the limitations of claim 9. Further Sherman et al disclose the method of claim 9, further comprising repeating the method (column 14, lines 30-35).

4. Claims 3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5537516 to Sherman et al in view of U.S. Patent No. 6606167 to Rees et al further in view of U.S. Patent No.6462835 to Loushin et al.

Regarding claim 3, Sherman et al in view of Rees et al teaches all the limitations of claim 1. However Sherman et al in view of Rees et al does not disclose the architecture of claim 1, further comprising a color calibration algorithm library having one or more color calibration algorithms for calling by the color calibration manager to one of generate and update the one or more color conversion tables.

Loushin et al disclose the architecture of claim 1, further comprising a color calibration algorithm library having one or more color calibration algorithms for calling by the color calibration manager to one of generate and update the one or more color conversion tables (column 1, lines 39-42; lines 50-59).

Sherman et al, Rees et al, and Loushin et al are combinable because they are in the similar problem area of color calibration.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the calibration algorithm of Loushin et al with the calibration system of Sherman et al in view of Rees et al to implement an effective color calibration system.

The motivation to combine the reference is clear because since there are different forms of hues as taught by Loushin et al it is necessary to have a library of calibration algorithm to calibrate a color printer (Loushin et al: column 1, lines 50-65).

Regarding claim 11, Sherman et al in view of Rees et al teach all the limitations of claim 9. Further Loushin et al discloses the method of claim 9, wherein performing the color calibration comprises calling one or more color calibration calls from a color calibration call library of color calibration calls, to one of generate and update the one or more color conversion tables (column 1, lines 39-42; lines 50-59).

5. Claims 6, 7, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5537516 to Sherman et al in view of U.S. Patent No. 6606167 to Rees et al further in view of U.S. Patent Application Publication No. US 2004/0160641 A1 to Kohler et al.

Regarding claim 6, Sherman et al in view of Rees et al teach all the limitations of claim 1. However Sherman et al in view of Rees et al does not disclose the architecture of claim 1, wherein the second interface comprises a user interface.

Kohler et al discloses the architecture of claim 1, wherein the second interface comprises a user interface (page 3, paragraph 41).

Sherman et al, Rees et al, and Kohler et al are combinable because they are in the similar problem area of color calibration.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the user interface of Kohler et al with the calibration system of Sherman et al in view of Rees et al to implement calibration with user input.

The motivation to combine the reference is clear because Kohler et al teach that the user interface can be used to control the printing of patches (page 3, paragraph 41).

Regarding claim 7, Sherman et al in view of Rees et al further in view of Kohler et al teach all the limitations of claim 6. Further Kohler et al disclose the architecture of claim 6, wherein the user interface comprises a graphical user interface (page 3, paragraph 41).

Regarding claim 14, Sherman et al in view of Rees et al teaches all the limitation of claim 9. Further Kohler et al discloses the method of claim 9, wherein inputting the raw measuring data comprises receiving the raw measuring data from the measuring tool through a measuring tool interface (page 2, paragraph 34).

Regarding claim 15, Sherman et al in view of Rees et al teaches all the limitation of claim 9. Further Kohler et al disclose the method of claim 9, wherein inputting the color data type, the one or more target identifiers, and the color patch order for each target identifier comprises receiving input from a user through a user interface (page 3, paragraph 41).

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5537516 to Sherman et al in view of U.S. Patent No. 6606167 to Rees et al further in view of U.S. Patent No. 6178007 to Harrington.

Regarding claim 12, Sherman et al in view of Rees et al teaches all the limitations of claim 9. However Sherman et al in view of Rees et al does not disclose the method of claim 9, wherein measuring by the measuring tool comprises measuring by an embedded sensor of the printer, substantially concurrent with printing the sample by the printer.

Harrington discloses a measuring tool wherein measuring by the measuring tool comprises measuring by an embedded sensor of the printer, substantially concurrent with printing the sample by the printer (column 5, lines 16-27).

Sherman et al, Rees et al, and Harrington are combinable because they are in the similar problem area of color calibration.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine embedded sensor of Harrington with the calibration system of Sherman et al in view of Rees et al to implement calibration using a printer.

The motivation to combine the reference is clear because if the sensor is within the printer it can reduce the overall hardware needed to implement the calibration.

7. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5537516 to Sherman et al in view of U.S. Patent No. 6606167 to Rees et al further in view of U.S. Patent No. 5995714 to Hadley et al.

Regarding claims 19, Sherman et al in view of Rees et al teach all the limitations of claim 17. However Sherman et al in view of Rees et al does not disclose the medium of claim 17, wherein the computer-readable medium is at least part of a firmware of the device, the device being the computerized device, the processor of which executes the computer program.

Hadley et al disclose calibration of printers wherein the computer-readable medium is at least part of a firmware of the device, the device being the computerized device, the processor of which executes the computer program (column 7, lines 10-18).

Sherman et al, Rees et al, and Hadley et al are combinable because they are in the similar problem area of color calibration.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the calibration software implementation of Hadley et al with calibration system of Sherman et al in view of Rees et al to implement calibration method using software.

The motivation to combine the reference is clear because memory can be saved in the computer if the software is implemented within the device.

Regarding claim 20, Sherman et al in view of Rees et al teach all the limitations of claim 17. Further Hadley et al disclose calibration of printers wherein the computer-readable medium is a part of a computer communicatively coupled to the device, the computer being the computerized device, the processor of which executes the computer program (column 7, lines 10-18).

Allowable Subject Matter

8. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Other Prior Art Cited

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6965462 to Henderson et al disclose system for calibration drift compensation in imaging device.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Beniyam Menberu whose telephone number is (571) 272-7465. The examiner can normally be reached on 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Williams can be reached on (571) 272-7471. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service office whose telephone number is (571) 272-2600. The group receptionist number for TC 2600 is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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Patent Examiner

Beniyam Menberu

BM

03/17/2006

KIMBERLY WILLIAMS
SUPERVISORY PATENT EXAMINER